

# CHEMOKINES AND METHODS FOR INDUCING THE DIFFERENTIATION OF FIBROBLASTS TO MYOFIBROBLASTS

## ABSTRACT OF THE DISCLOSURE

This invention is based on the discovery that chemokines induce fibroblasts to  
5 differentiate to myofibroblasts, which play a critical role in wound healing and are  
implicated in a number of fibrotic diseases. This activity has been localized to a peptide in  
the N-terminus of several chemokines. Accordingly, the invention provides polypeptides  
that induce the differentiation of fibroblasts to myofibroblasts *in vitro* and *in vivo*, nucleic  
acids encoding such polypeptides and related vectors, host cells, and composition containing  
10 these components. The invention also encompasses methods for inducing or inhibiting  
differentiation of fibroblasts to myofibroblasts, *in vivo* as well as *in vitro*, and screening  
methods for identifying other agents that modulate myofibroblast differentiation.